



PRESS REVIEW

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VSPC Makes 370 'More Approachable'

By Don Leavitt
Of the CW Staff

WHITE PLAINS, N.Y. — Strong support for interactive use of large IBM 370s by people who previously considered the machines unapproachable is one of the major design goals of IBM's Virtual Storage Personal Computing (VSPC) program product introduced last week, according to the firm.

VSPC allows multiple concurrent users without heavy DP backgrounds to "borrow" a portion of their company's computer for problem-solving tasks while most of the computer is being used for production work by operations or application development work by the professional programming staff, IBM said.

But this new approachability is attained at the cost of an additional layer of control software. VSPC resides in the 370 along with the operating system, access method software and the user's choice of special, separately priced language processors also introduced last week.

Indicative of the overhead impact of VSPC is the fact that VS APL, VS Basic

capabilities, but no real application-level logical facilities. More important, the company said, VSPC "manages the session at the terminal."

This management includes support for accessing, modifying if necessary and then compiling or executing previously stored command strings or programs written in APL, Basic or Fortran.

While these programs may have been written by the users or by their company's DP staff, they might also be selected from a range of programs and functional routines IBM has available for VSPC users.

No matter what the source of the programs, the neophyte user need not understand their internal technical aspects as and VSPC Fortran can each be used independently with various operating system environments and without VSPC itself.

'Manages the Session'

Primarily, VSPC provides a command language utilizing simple English phrases, which gives the user some processing

long as he knows what they require as input and produce as output.

But VSPC also provides an input editor function in support of creation and maintenance of programs from the terminal.

Although it appears to be somewhat akin to IBM's Time-Sharing Option (TSO), VSPC differs from it substantially by not being part of the operating system and by "protecting" the user

The user interface under VSPC is much simpler than under TSO, and in fact changes in the operating system environment should be completely transparent to the VSPC user.

Library Facility

In addition to the command language and the input editor, VSPC is said to include a library facility which enables users to limit access, in varying degrees, to data and programs they have stored.

VSPC also has a conversational remote job entry facility for handling long-running jobs where no user interaction is required.

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Sharp Runs APL in Batch Mode

TORONTO — I.P. Sharp Associates Ltd. has enhanced the facilities of APL as implemented on its time-sharing network covering North America and much of Europe. The update of Sharp APL is said to allow price reductions of anywhere from 28% to 60% on production systems.

With the enhanced facilities, a spokesman explained, it is possible to use APL in a batch environment, making this version of the language "highly competitive" with standard batch languages such as Cobol, PL/I and Fortran.

Though APL has a reputation of being an esoteric language suitable only for scientific experimentation and highly in-

teractive work, Sharp contended its current packaging allows the language to be used at low cost for routine applications such as accounting runs, mailing systems and linear programming.

Efficiency is based on the design and development of two major components, independent runners and terminal surrogate files. Independent runners are APL tasks which operate without need of an attached remote terminal, the spokesman said.

The terminal surrogate file is a file that contains output which normally would be sent to the attached terminal. This arrangement allows the majority of existing

systems to operate in either interactive or batch mode with minimal program modification, he added.

Beyond that, it allows simple design for CRT systems with page recall options, task execution independent of communications noise, spooling of terminal output for subsequent reprocessing and many others, according to Sharp.

The cost reduction stems from the elimination of connection charges, character charges and a reduction of CPU charges, the spokesman noted.

I.P. Sharp Associates is headquartered at 145 King St. West, Toronto, Ont. M5H 1J8.

VSPC Aimed at Untrained Users

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This facility can help increase programmers' productivity, since they can use it "to develop and maintain programs written in any language supported by the virtual system control program," a spokesman added.

This aspect of VSPC's capabilities is apparently not limited to the interactive languages, but can be applied as well to batch-oriented ones such as Cobol.

Professional programmers, then, are able to retrieve virtually any program they have stored on a source statement library.

VSPC permits the manager of a computer facility to control the use of the system's resources and to maintain security. The manager can, for example, allocate the amount of central processor time and the amount of library data storage space available to VSPC users.

ID codes and password assignments are available for security, IBM noted.

The support facility can be used with 370 models 135 through 168, IBM said. Though no storage minimum was cited with those CPUs, the company noted that models 115 and 125 with a main memory of 256K characters "can support a limited number of terminals for trial purposes."

Shipment of VSPC is scheduled to begin in the second quarter for use with OS/VS1, in the third quarter for OS/VS2 (MVS) and in the fourth quarter for DOS/VS. VSPC will be available under license for monthly fees ranging from \$900 to \$1,200.

Shipments of the language processors are also scheduled to start in the second quarter. These program products will also be under license for monthly fees of \$400 each for either VS APL or VSPC Fortran and \$385 for VS Basic.

Application software for use with VSPC includes Business Analysis/Basic, Math/Basic and Stat/Basic, which are all program products supported by IBM.

Under APL, Minipert — also a program product — and Graphs and Histograms, Graphpak, APL coordinate geometry and zero and integer support under APL — all Field-Developed Programs — can be supplemented with a number of Installed User Programs, IBM said. Prices were not immediately available on these packages.

Any standard Fortran programs can be used with VSPC Fortran.

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Law Office Management And Operations

By B.W. Hildebrandt

Mr. Hildebrandt, whose column is a regular feature of the Law Journal, is an experienced law office administrator and most recently a management consultant for law firms' problems. He is the founder and immediate past president and chairman of the Association of Legal Administrators, an author and lecturer.

Computerization — Time Sharing

The use of the computer in the legal profession is now a well established practice. Furthermore, as the cost of utilizing this technology continually decreases the number of lawyers



able to use it increases. Not too long ago only the very large firms would even consider using some aspect of computerization, but today all lawyers should, at the very least, understand the impact that the computer is having on their profession.

Not Well Understood

One of the aspects of computer technology that is still only used by a very small number of law firms, and which is not very well understood by many, is the concept of time sharing.

Time sharing is the method whereby a firm rents time on somebody else's computer on a demand basis. Demand basis meaning that the user can have access to the computer as he requires it. Access is gained through a terminal located in the subscriber's office. Generally, however, there is some restrictions on the time when the computer is available. For example, the company providing the service may stipulate the computer is available from 7 A.M. to 11 P.M. and that usage after 11 P.M. will be on special arrangement and at a special rate. It should also be noted that some time sharing contracts provide that usage during off peak hours, ex. 8 P.M. to 11 P.M. will be at a reduced rate.

To better understand the methods of time sharing we will analyze the various applications that are most applicable to the legal profession.

1. Word Processing

There are systems available that allow a firm to do text editing on a time shared basis. One such system is provided by Bowne Time Sharing, Inc., located in New York. To use their service, Bowne installs a computer terminal in the user's office connected via telephone lines to their central computer. The secretary inputs a document into the computer through a Selectric typewriter terminal, through the use of various codes. The finished product is then printed out either on the Selectric terminal or on a high speed printer located in Bowne's office. Bowne then delivers the finished document either the same day or on an overnight schedule depending on the arrangement with the subscriber. The advantage to the above system is that the computer can do complicated revision work, boiler-plate documents, contracts, leases, and the like extremely fast and return them in, not only finished form, but in printed form.

Some Disadvantages

There are, however, several disadvantages which should also be considered. First, the use of the equipment takes more training than conventional word-processing equipment due in part to the large number of codes that must be learned in order to properly utilize the equipment. Second, unless a printer is installed in the subscriber's office the system is really no faster than the

print out speed of the Selectric typewriter.

The use of the high speed printer, on the other hand, introduces a delivery factor which, in my opinion, is not satisfactory for everyday word processing requirements. Last, the cost of the system will be a drawback except for larger firms. The difficulty with time sharing in attempting to estimate cost is that charges are based on an hourly usage rate and, therefore, accurate cost projections are difficult to make.

Other Services

There are other services that time sharing systems can offer, which should also be considered.

One such system is litigation-document control. Using Bowne's Word I concept a firm can index all documents that may be present in a major lawsuit. This indexing allows attorneys to use the computer to sort and research documents such that they can be located and identified in a minimum of time. For example, a particular document could be indexed by author, recipient, date, subject and the like. You can quite readily see that in a large anti-trust or products liability case such a tool could be invaluable and in the long run save attorneys and the client a substantial amount of time and expense.

In summary, the time sharing, word processing concept has many advantages for specific kinds of work especially where a final printed product is required. It still cannot, however, be justified by many firms and is certainly no substitute for in-house, word processing for everyday work.

2. Computerized Research

A relatively new and not fully developed concept is the use of time-sharing for legal research. The best known such system available today is Mead Data's Lexis system. As with word processing, the time sharing company installs a computer terminal in the subscriber's office, preferably in the library. This terminal not only has a key board but also a television-type screen, as well as a line printer. To use the system, the lawyer sits at the console and addresses a specific question on a point of law to the computer. The computer then responds to the question with the answer appearing on the screen. Ad-

ditional questions can then be asked to narrow down the area of research and the applicable information can be put on hard copy through the use of the printer. The Lexis system is a full word research system. This means that the law, and the cases applicable to that law, is in the memory of the computer and is accessible on a word for word basis at all times.

Content Restricted

The system's library is still somewhat restricted with only a few of the states (Ohio and New York for certain) having their laws contained in the system. Additionally, most of the Federal Securities and tax laws are also in the library. There is, however, a continuing effort to increase the size of the computer library both at the state and federal levels.

The primary advantage of this system is that it allows research to be done in a relatively short period of time as compared to manual research, thereby raising the productivity of attorneys. It also permits research capabilities with such things as the SEC No Actions Letters that were heretofore unavailable. Furthermore, it has been my experience that a properly trained associate can locate cases on a particular matter that may have been missed using more conventional research methods.

There are several restrictions, however, that should be considered. Computerized research is not, at least at this point and may never be, a substitute for conventional research, nor will it replace the need for an adequate library. Indeed a lawyer who asks the computer to print out the text of a particular case rather than getting the proper cite and reading it in the actual law text will find that the cost of the system is prohibitive.

Cost a Factor

The cost of the system is another problem and cannot, in most cases, be justified except by medium to large law firms. There are several pricing plans available and an effort is being made to make the system more affordable by the smaller firms.

Computerized research is no longer a dream of the future. An increasing number of medium-to-large size law firms are installing the system as well as government agen-

cies such as the SEC and the IRS.

It is important that attorneys become familiar with computerized research because in the near future a lawyer is going to be in a courtroom where his adversary has spread out in front of him a computerized list of all cases pertaining to the trial. The implications of such a happening are far reaching and still not fully understood by many in the profession.

In conclusion, time sharing is now serving the legal profession in a number of ways and should be examined and utilized where a firm can identify a particular need. It is, however, still relatively expensive and certainly not the answer to all of the law firm's clerical or research needs.

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Lowest Cost Time-Sharing System From DEC Based on PDP-11/V03

MAYNARD, Mass. — A four-user system based on Digital Equipment Corp.'s PDP-11/V03 microcomputer and aimed at educational users is said to be the firm's lowest cost time-sharing offering.

Called the MU/11V03, the basic system includes 28K words of memory, a dual floppy disk memory storage unit and a choice of either the 24-line VT-52 video display or the LA 36 Decwriter terminal and will cost \$16,220.

The firm said three more terminals can be selected at additional cost from the following: a 12- or 24-line CRT, a 30 char./sec hard-copy terminal, graphics terminal and one with hard-copy capabilities.

Primary Applications

Primary applications will include computer literacy and usage studies; problem-solving and computation for mathematics, engineering and science; simulation of physical and social phenomena; and computer-aided instruction in mathematics and languages.

Users can write and execute programs in Basic, Fortran IV (optional for \$700) or Macro Assembly language under DEC's RT-11 real-time operating system.

One Fortran IV or Macro program may be executed simultaneously with up to three Basic programs.

The system exemplifies PDP-11 family compatibility in that Basic or Fortran IV programs developed on the MU/11V03 will run on all other PDP-11 models, according to DEC.

Highlights of MU-Basic on MU/11V03 include string calculations, program chaining and virtual arrays.

Prices range from \$16,220 for a single terminal version to \$19,970 for the maximum four-terminal configuration. Initial deliveries are scheduled for January.

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Set to Expand Infonet by Intelsat

LOS ANGELES — Computer Sciences is set to expand within 60 days its Infonet time-sharing network to Western Europe via the Intelsat communications satellite, it was learned last week.

Computer Sciences would give few details about the expansion to Europe. But last July the company licensed a subsidiary of the Spanish government telephone utility to offer Infonet services in that country. It was learned that in the start-up stage of the Spanish operation, processing will be done by Computer Sciences computers in the U.S. via satellite. Eventually a complete, integrated service, including processing, is planned for Spain by itself, however.

Computer Sciences will supply Univac 1108s and IBM 360 computers from a portfolio with book value of about \$7 million, used when it was active in the third-party leasing business, plus equipment in the company's internal inventory, spokesmen said. Company sources, however, did not think a wide percentage of Infonet's 1,000 customers will be leasing computers.

Before the new equipment was installed, customers were linked to a specific Infonet computer.

After heavy start-up costs, Infonet is now bringing in revenues of between \$40 million and \$50 million a year and is profitable, according to company president William Hoover. About half the revenues come from a contract with the General Services Administration which could be opened to competing time-sharing companies later.

Computer Sciences said it has purchased about \$1 million worth of remote communications concentrators and bixlexers which can double Infonet's data transmission speed to 19,200 bits per second "over standard common carrier facilities." The equipment includes nine Comten-20 switching RCCs and 59 Codex 296 bixlexers.

As part of an improved Infonet network architecture, the equipment will allow transmission at satellite speeds.

The devices also automatically route traffic to available circuits, the company said, enabling customers to use Computer Sciences computers at various different locations.

The company said the new configurations also will allow it to lease computers to Infonet customers, "giving the user nationwide access to a dedicated computer equipped with Infonet's operation system and extensive program library."

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